COMPARATIVE STUDY BETWEEN CLIPPED AND CLIPLESS LAPAROSCOPIC CHOLECYSTECTOMY

Thesis

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AIM OF THE WORK

The aim of this work is to compare clipped versus clipless laparoscopic cholecystectomy as regard safety, feasibility and cost with the aim of developing possible non-sophisticated harmless technique and ethically approved.

INTRODUCTION

More than 20 million people in the USA have gall stones in their gallbladders; about 300,000 operations are performed annually for this disease, and at least 6000 deaths from their complication.[1]

The incidence of gallstones rises with age. So that between 50 and 65 years of age about 20% of women and 5% of men are affected.[1]

Laparoscopic cholecystectomy (LC) is the gold standard for the surgical treatment of symptomatic gallstones. The advantages of this surgical approach have included a positive impact on the postoperative quality of the patient's life as well as optimal short- and long-term results.[2]

The standard laparoscopic cholecystectomy is commonly performed by means of specialized instruments. For gallbladder dissection, the electrosurgical hook, spatula, and/or scissors, using high-frequency monopolar technology, have

been used in most centers. Occlusion by simple metal clips was the most frequently used technique to achieve both cystic duct and artery closure. [3]

Alternative techniques for cystic duct closure have included sutures, a three-throw reef knot, or Roeder slip knots. However, these alternatives are technically more difficult and, therefore, were used infrequently. [3]

Although the laparoscopic cholecystectomy is a safe technique, several reports have pointed out special injuries and postoperative complications inherent in the limits of the current technology and technique. These include deep tissue damage with possible distant tissue damage by the high-frequency electrosurgery involving vascular and biliary structures in the vicinity of the cystic duct and artery, bile leakage due to slippage of the clips, and visceral and solid organ injuries due to frequent instrument exchange, which is sometimes performed without optic guidance. [4]

The ultrasonically activated (Harmonic) scalpel was designed as a safe alternative to electrocautery for the hemostatic dissection of tissue and was introduced into clinical use nearly a decade ago. This innovative method of cutting

tissue was based upon the coagulating and cavitational effects provided by a rapidly vibrating blade contacting various tissues. [5]

The resulting decrease in temperatures, smoke, and lateral tissue damage placed the Harmonic scalpel in contrast to the effects seen with the more traditional electrosurgery/cautery. In addition, the elimination of inadvertent, sometimes unrecognized, electrical arcing injuries with their potentially hazardous sequelae supported the role of the Harmonic scalpel as a potentially safer instrument for tissue dissection. [6]

The replacement of scissors, dissector and clips applicator with the harmonic scalpel gives the opportunity to use a single instrument during the whole surgical procedure, limiting the number of passages through the trocars and consequently, reducing the possibility of causing lesions to the intra-abdominal organs. [7]

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LIST OF ABBREVIATIONS

ASC	Advanced Surgcial Concepts
AWL	Abdominal Wall Lifting
BC	Before Christ
BMI	Body Mass Index
CA	California
CBD	Common Bile Duct
CBDI	Common Bile Duct Injury
CO2	Carbon Dioxide
CT	Computed Tomography
D.M	Diabetes Mellitus
DC	Direct Current
ENT	Ear, Nose and Throat
ERCP	Endoscopic retrograde cholangiopancreatography
GLC	Gasless Laparoscopic Cholecystectomy
Hg	Mercury
HT^2	Square Height
IDTs	Instrument Delivery Tubes
IL	Illinois
IMTN	International Multicenter Trial on Clinical NOTES
IOC	Intraoperative Cholangiogram
Kg	Kiligram
KHz	Kilo Hertz
LC	Laparoscopic cholecystectomy
LESS	Laparo-Endoscopic Single-site Surgery
LPLC	Low Pressure Laparoscopic Cholecystectomy
LVSS	Ligasure Vessel Sealing System
MHz	Mega Hertz
Min	Minute
MIS	Minimal Invasive Surgery
MLC	Minilaparoscopic Cholecystectomy
Mm	Millimeter
MRCP	Magnetic Resonance Cholangiopancreatography
NOSE	Natural Orfice Specimen Extraction
NOTES	Natural Orifice Translumenal Endoscopic Surgery

NOTUS	Natural Orifice Transumbilical Surgery
OC	Open Cholecystectomy
PTC	Percutaneous Transhepatic Cholangiogram
PTCD	Percutaneous Transhepatic Cholangiogram biliary Drainage
SAGES	Society of American Gastrointestinal and Endoscopic Surgeons
SAS	Singel Access Surgery
SD	Standard Deviation
SILS	Single incision Laparoscopic surgery
SPA	Single Port Access
TLS	Thermal Ligating Shears
T-NOTES	Totally Natural Orfice Translumenal Endoscopic Surgery
TUES	Transumbilical Endoscopic Surgery
U/S	Ultrasound
UPS	Universal Power Supply
UPS	Universal Power Supply
USA	United States of America
Vs	Versus
WT	Weight

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INTRODUCTION

CHAPTER 1